A presentation from the 2009 Topical Symposium:

#### Energy Security: A Global Challenge

Hosted by:
The Institute for National Strategic Studies
of
The National Defense University

29-30 September 2009

#### By PAUL BOLLINGER



Papers presented at NDU Symposia reflect original research by members of NDU as well as other scholars and specialists in national security affairs from this country and abroad. The opinions, conclusions, and recommendations expressed or implied within are those of the authors and do not necessarily reflect the views of the Department of Defense or any other agency of the Federal Government.

including suggestions for reducing	completing and reviewing the collect this burden, to Washington Headqu uld be aware that notwithstanding ar DMB control number.	arters Services, Directorate for Inf	formation Operations and Reports	s, 1215 Jefferson Davis	Highway, Suite 1204, Arlington	
1. REPORT DATE <b>SEP 2009</b>		2. REPORT TYPE		3. DATES COVE 00-00-2009	ered 9 to 00-00-2009	
4. TITLE AND SUBTITLE				5a. CONTRACT NUMBER		
No Energy Security without a Fight				5b. GRANT NUMBER		
				5c. PROGRAM I	ELEMENT NUMBER	
6. AUTHOR(S)			5d. PROJECT NUMBER			
			5e. TASK NUMBER			
			5f. WORK UNIT NUMBER			
Science Application	ZATION NAME(S) AND AE ns International Coi IC Drive,McLean,V	rporation,Strategic	: Energy	8. PERFORMING REPORT NUMB	G ORGANIZATION ER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)			10. SPONSOR/MONITOR'S ACRONYM(S)			
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)		
12. DISTRIBUTION/AVAII Approved for publ	LABILITY STATEMENT ic release; distributi	ion unlimited				
13. SUPPLEMENTARY NO <b>2009 Topical Symp</b>	otes oosium: Energy Secu	ırity: A Global Ch	allenge, 29-30 Sep	2009, Washi	ngton DC	
14. ABSTRACT						
15. SUBJECT TERMS						
16. SECURITY CLASSIFICATION OF: 17.			17. LIMITATION OF	18. NUMBER	19a. NAME OF	
a. REPORT unclassified	b. ABSTRACT <b>unclassified</b>	c. THIS PAGE unclassified	Same as Report (SAR)	OF PAGES 11	RESPONSIBLE PERSON	

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and

**Report Documentation Page** 

Form Approved OMB No. 0704-0188



Paul Bollinger
Vice President Strategic Energy Programs
SAIC

## **Energy Security Drivers**



- Defense Science Board Report "More Fight Less Fuel" February 2008 (2001 Report)
- Air Force Senior Focus Group on Energy 07
- Army Senior Energy Council 08
- Navy Executive Energy Steering Committee 08
- Marine Corps Energy Initiative 09

## **Energy Goals for Military**



- Reduce Consumption
- Increase Efficiency
- Expand use of alternative and renewable energy
- Ensure critical mission capability 24/7/365
- Create a culture of energy awareness

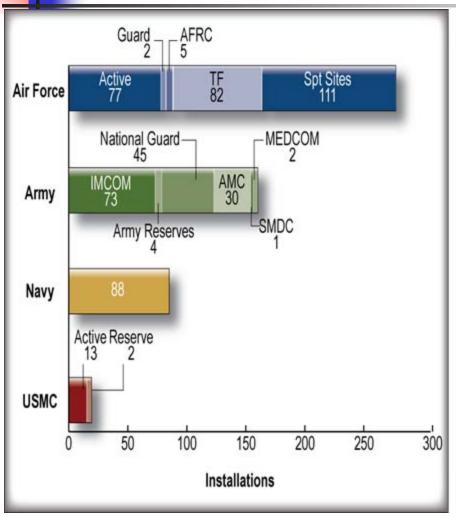
## **Federal Energy Mandates**

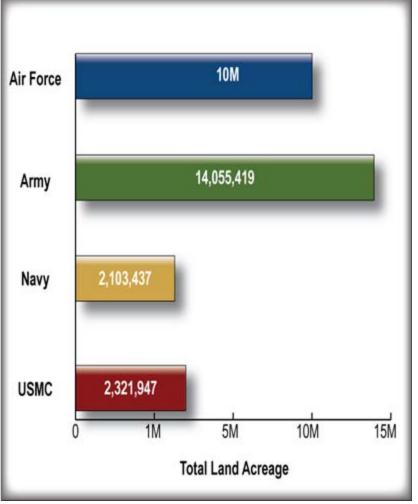
Directive Issues	Energy Performance Target	<u>Source</u>
Installations Energy	Reduce by 3%/year from FY08-15 30% energy reduction by 2015	EO 13423/EISA 2007
Electricity from Renewable Sources	Must be 3% by FY05-09; 5% by FY10-12; and, 7.5% by FY12+	EPAct 2005
Fossil Fuel Use in new/renovated buildings	Reduce 55% by 2010; 100% by 2030	EISA 2007
Hot water in new/renovated buildings solar power	At least 30% of hot water demand from solar hot water heating by 2015	EISA 2007
Non-Petroleum Fueled Vehicles	Increase annually by 10% until 100%	EO13423
Energy Metering	Meter electricity by Oct. 2012; and, Meter natural gas/steam by Oct 2016	EPAct 05/EISA 07

## Major Projects Today & Future

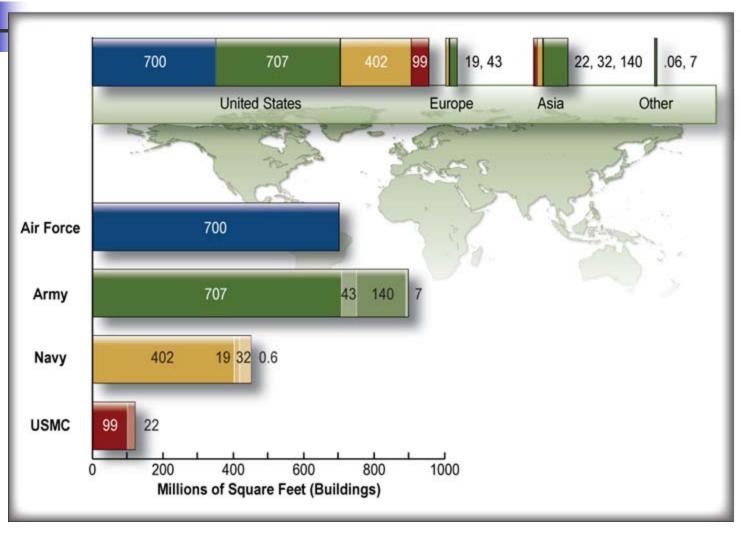
- 1987 Navy NWS China Lake 200Mw
- 2007 Air Force Nellis AFB 14.2Mw
- 2009 Army Ft. Irwin 500Mw
- 2010 Army Hawthorne Depot 30Mw
- 2010 Marines In-Theatre Programs ??
- 2010 Air Force Edwards AFB 300Mw
- Non-Infrastructure
  - Air Force, Navy and Army fleet certification on alternative fuels by 2011

### Installations and Land

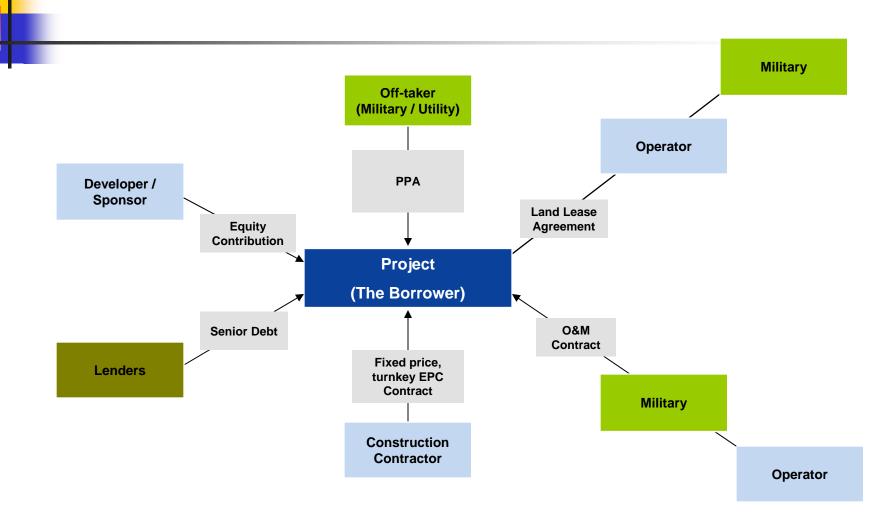




# **Buildings** (millions of square feet)



## **Energy Project structure**



## **Major Challenges**



- Financial Markets
- Regulatory Markets
- Transmission & Distribution
- OMB Scoring of Projects
- Enterprise Approach by Services
  - Align Policy, Programs, People & Budget

## **Thank You!**

"Don't feed the monster"



We've tamed some very scary energy problems.

